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WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER	
LEFF, STEVEN N	

ART UNIT	PAPER NUMBER
1794	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/532,680	NAKAI, TOSHIO	
	Examiner	Art Unit	
	STEVEN LEFF	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 January 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

- The amendments to the specification and abstract in the reply filed 1/28/08 have been accepted.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

- Claim 14 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification teaches a freezing temperature of "-18C or under" and thus the phrase "18C or below" of claim 14 is rejected.
- Claim 14 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a freezing temperature of -18C (par. 0019) the specification does not reasonably provide enablement for "freezing the foodstuff to a temperature of 18C or below". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims. Although the specification makes reference to specific freezing temperatures, the teaching of "freezing the foodstuff to a temperature of 18C or below" is not disclosed in the specification and thus the phrase lacks enablement.

Case law holds that applicant's specification must be "commensurately enabling [regarding the scope of the claims]" *Ex Parte Kung*, 17 USPQ2d 1545, 1547 (Bd. Pat. App. Inter. 1990). Otherwise **undue experimentation** would be involved in determining how to practice and use applicant's invention. The test for undue experimentation as to whether or not "freezing the foodstuff to a temperature of 18C or below" can be used as claimed and whether claim 14 meets the test as stated in *Ex parte Forman*, 230 USPQ 546, 547 (Bd. Pat. App. Inter. 1986) and *In re Wands*, 8 USPQ2d 1400, 1404 (Fed.Cir. 1988). Upon applying this test to claim 14 it is believed that undue experimentation **would** be required because:

(a) *The quantity of experimentation necessary* is **great** since claim 14 reads on "freezing the foodstuff to a temperature of 18C or below" while the specification discloses freezing at a temperature of -18C

(b) There is **no** *direction or guidance presented* for "freezing the foodstuff to a temperature of 18C or below".

(c) There is an ***absence*** *of working examples* concerning "freezing the foodstuff to a temperature of 18C or below".

In light of the above factors, it is seen that undue experimentation would be necessary to make and use the invention of claim 14.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- Claims 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
    - Claim 14 is rejected as it is unclear how the phrase "18C" is defined as a freezing temperature and thus it is further unclear if this is the actual temperature as defined by the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

- Claims 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al. (JP 11-192060) in view of Sugiyama (EP 1290949).

Aoki et al. teach a method of cooking food having animal protein as a main component (par. 0001 machine translation). More specifically Aoki et al. teach uniformly preheating by Joule heat (par. 0029 machine translation) by forming a liquid electrolyte film on the foodstuff (par. 0010 machine translation), and passing electric current through the foodstuff via the liquid electrolyte film so that the denaturing of protein occurs in the entirety of the foodstuff (par. 0024 machine translation).

Aoki et al. further teach freezing the preheated foodstuff without a pre-cooling step being performed between said preheating and said freezing (par. 0025 machine translation) where the preheating (par. 0029 machine translation) is carried out by transporting the foodstuff between a current-carrying portion of a heating device (fig. 2 ref.23) and an electrode portion of the heating device (fig. 2 ref. #30), feeding the liquid electrolyte onto the foodstuff to form a film of the liquid electrolyte on the foodstuff, and passing electric current through the foodstuff via the current-carrying portion and the electrode portion of the heating device (par. 0024 machine translation).

In addition, the transporting of the foodstuff comprises transporting the foodstuff on a conveyer (par. 0023 machine translation), and the feeding of the liquid electrolyte comprises storing the liquid electrolyte in a supply tank located above the conveyor, and dropping the liquid electrolyte onto the foodstuff as the foodstuff is transported by the conveyer (par. 0023 machine translation). Aoki et al. continue by teaching that the dropping of the liquid electrolyte onto the foodstuff comprises dropping the liquid electrolyte through slits formed in a lower part of the supply tank such that the liquid electrolyte flows along flexible brushes (par. 0017 machine translation) that hang from the supply tank and contact the foodstuff as the foodstuff is transported by the conveyer (figs. 1 and 2).

With respect to claim 14, although Aoki et al. does not teach the specific temperature of below 18C, MPEP 2144.01 states that "in considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw

therefrom", where in the instant case since Aoki et al. teaches freezing or refrigerating with respect to a sterilized food product in paragraph 0025 and since 18C is equal to roughly 64.4 F it is the Office's position that Aoki et al. teach freezing the food product at less than 18C minus any clear and convincing arguments to the contrary since a freezing temperature must be roughly 0C or 32F which is be below 64.4F.

However Aoki et al. is silent with respect to heating the foodstuff to a temperature of at least 50°C but less than 80°C.

Sugiyama et al. teach a heat sterilized seafood product using Joule heating (par. 0031). More specifically Sugiyama et al. teach heating the foodstuff to a temperature of 75C (par. 0040, table 1).

However, Aoki et al. does teach uniformly preheating by Joule heat (par. 0029 machine translation) by forming a liquid electrolyte film on the foodstuff (par. 0010 machine translation), and passing electric current through the foodstuff via the liquid electrolyte film, where Aoki et al. also teach the device for treating different foods (par. 0028 machine translation) where Sugiyama et al. teach heating the foodstuff to a temperature of 75C. Therefore, although Aoki et al. is silent with respect to specific heating temperatures, Aoki et al. does teach the use of Joule heating for its art recognized and applicant's intended function of heat sterilizing where Sugiyama et al. teach heating the food to a specific temperature of 75C thus producing a heat sterilized food which upon thawing has the same appearance and taste while effecting protein denaturation one of one of ordinary skill in the art would have been motivated to combine the teachings of Aoki et al., and Sugiyama and taught a specific treating range of between 50C-80C as taught by Sugiyama et al. since a heating temperature of more than 85C would cause the degeneration of the protein to overly progress resulting in a reduction of the freshness feeling as is taught by Sugiyama et al. (par. 0016) where a minimum heating temperature is required in order to cause the inner part of the food product to be sufficiently heated to provide the desired degree of sterilization (par. 0015).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to teach the specific treating temperature range in order to provide a method which provides a heat sterilized product which maintains the same appearance, taste and texture thereby increasing sales since the food item has a longer shelf life without changing the organoleptic properties of the food item thus

making the product more appealing to the consumer since it has been sterilized yet is qualitatively the same as the food in the uncooked state.

Further, since the only difference between the prior art and the claims was a recitation of relative temperatures with respect to the food to be treated, where Aoki et al. teach the claimed method and Sugiyama et al. specifically teach a defined temperature of 75C, one of ordinary skill in the art would not expect the method of the instant claims to perform differently than the prior art method, thus the claimed method is not patentably distinct from the prior art method (See MPEP 2144.04 IV A). "Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation," (see MPEP 2144.05 IIA), as the normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages" (see MPEP 2144.05 IIA) to achieve the desired amount of inhibition with regard to the population of micro-organisms with respect to a specific food item and a specific formulation.

It would have further been obvious since MPEP 2144.07 states that the selection of a known process based on its suitability for its intended use supports a prima facie obviousness determination where Sugiyama et al. teach heating the foodstuff to a temperature of 75C where it would have been obvious to one of ordinary skill in the art to have combine the two methods, each of which is taught by the prior art to be useful for the same purpose, in order to form a third method which to be used for the very same purpose, the idea of combining them flows logically from their having been individually taught in the prior art (see MPEP 2144.06), since Aoki et al. teach an apparatus for conducting the sterilization process, and Sugiyama et al. teach specific working parameters with respect to joule heating of food to provide a specifically sterilized food product.

Response to Arguments

Applicant's arguments, filed 1/28/08 with respect to the rejection(s) of claim(s) 1-8 under 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Aoki et al. and Sugiyama.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEVEN LEFF whose telephone number is (571)272-6527. The examiner can normally be reached on Mon-Fri 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571) 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Drew E Becker/
Primary Examiner, Art Unit 1794

/Steven Leff/
Examiner, Art Unit 1794